

Storytelling: Random walk or competencies driven career?

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“Freedom
(the ability to control our own destiny)
makes prediction of human behaviour difficult.”

(Gluck 1997)

“People stay much the same in their basic dispositions,
but these enduring traits lead them to
particular and ever changing lives.”

(McCrae and Costa 2002, 6)

Storytelling: Random walk or competencies driven career?

To my daughters

Resumo

Todos temos uma carreira, quer seja paga ou em voluntariado, de sucesso ou frustrante, escolhida ou imposta. Todos nós despendemos tempo em experiências de trabalho. Na maior parte das vezes, não paramos para pensar sobre o que fazemos ou porque o fazemos. Seguimos o que parece ser a ordem natural da vida. Este estudo de caso convida a parar por um momento e pensar no que é que de facto move uma carreira.

Teorias e modelos de desenvolvimento de carreira recolhidos no estudo do estado da arte são combinados e integrados para criar o modelo da carreira.

Analisando este modelo onde as entidades e factores considerados evoluem e interagem no tempo, respondemos a três perguntas:

Como é que esta carreira em particular se desenvolveu?

Concluimos que a carreira em estudo é uma carreira sem fronteiras de um indivíduo proteano com uma atitude empreendedora. A carreira desenvolveu-se numa sequência contínua de lugares onde, através da interacção entre o Sujeito e os Chefes, Pares e Família, se criou conhecimento.

Porque é que esta carreira em particular se desenvolveu assim?

A criação contínua de conhecimento abriu oportunidades ao Sujeito. A escolha de as agarrar ou não foi uma consequência das suas aspirações e personalidade, com o condicionamento de questões familiares e do ambiente económico.

Esta carreira em particular, foi movida pela criação de competências ou evoluiu ao acaso?

Apenas numa leitura muito superficial podemos ver aleatoriedade nesta carreira. De facto, a carreira é movida por competências que se criam sinergeticamente, criando condições para a transição seguinte.

Transcendendo a resposta às perguntas de pesquisa, este estudo de caso trouxe os seguintes benefícios:

- Criou de uma ferramenta para descrever e analisar narrativas de vida
- Evidenciou os factores por trás da evolução da carreira
- Indicou a tendência provável para o desenvolvimento futuro da carreira
- Forneceu uma metodologia de transformação e definição da entidade de carreira

Abstract

Everyone has a career, whether paid or voluntary, successful or frustrating, chosen or enforced. We all spend time experiencing work. In most situations, we do not stop to think about what we do or why we do it. We follow what appears to be a natural order of life. This case study invites you to take a moment and think about what in fact drives a career.

Career development theories and models gathered from the state of the art were combined and integrated to create a model of the career.

By analyzing this model where the considered entities and factors evolve and interact on a timeline, we were able to answer three research questions:

How did this particular career develop?

We concluded that the career being studied is a boundaryless career of a protean individual with an entrepreneurial attitude. It has developed in a continuous sequence of places where knowledge was created through the interaction of the Subject with bosses, peers and teachers.

Why did this particular career develop the way it did?

The continuous creation of knowledge qualified the Subject for taking opportunities. The choice to take it or not was a consequence of the Subject's aspirations and personality, conditioned by the economic environment and family issues.

Was this particular career moved by competencies that are created, or was the career a random walk?

Only on a very superficial reading can we see randomness in this career. In fact, the career is driven by competencies that build up synergistically, creating the conditions for the next transition.

Transcending the answer to the research questions, this case study provided the following benefits:

- Created a tool for describing and analyzing life narratives
- Highlighted the factors behind the evolution of the career
- Indicated the likely trend for future developments of the career
- Provided a means for transformation and career identity definition

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1 Introduction

Everyone has a career, whether paid or voluntary, successful or frustrating, chosen or enforced. We all spend time experiencing work. In most situations, we do not stop to think about what we do or why we do it, we just do it. We follow what appears to be a natural order of life. This study invites you to take a moment and think about what in fact drives a career.

This first chapter of the study presents an overview of the motivation and objectives, the particular case being studied, the proposed three research questions; and the methodology. It also briefly summarizes the structure of the document.

1.1 The Motivation

In the literature one can find studies on many critical career moments. For example, the choice of a career after completing college education, the impact of an expatriation (Peltonen 1998), (Stahl, Miller, and Tung 2002), and the influence of a career sidestep (Theunissen et al. 2011). Research on the capacity of third parties to influence the individual is also available, as well as the retention actions a firm can take and career counselling techniques and methods (Reid and West 2011), (Gluck 1997), (Pryor, Amundson, and Bright 2008), (Vilhjálmssdóttir and Tulinius 2009). Other process focused studies involve the research on skills and skills' development (Defillippi and Arthur 1994), (Heilmann 2011), (Colakoglu 2011). Other studies deal with the career influencing factors that are external to the individual as the impact of an insecure employment environment (Briscoe et al. 2012).

However:

- (1) external factors usually do not include life-events. "Exploring the dynamic nature of the interaction between the work and life domains has been generally ignored in the previous literature." (Georgellis, Lange, and Tabvuma 2012);
- (2) there is a need for more holistic studies: "It is evident from the literature that a strong voice exists for more holistic, convergent approaches to career development." (Peake and McDowall 2012, 398).
- (3) Without a holistic approach to science, it is unlikely that we are able to formulate the hypotheses necessary to find the interactions between factors. "It is also unlikely that one will be convinced of their existence by the data uncovered by such research efforts." (Mitroff and Kilmann 1977, 125)

1.2 Objectives

This case study is meant to contribute to fill this gap. Its purpose is to build a holistic description of a particular career path of an engineering graduate (the Subject) that crosses country boundaries, industries and functional areas during more than 15 years of working experience.

By making this story available for future research, we expect to respond to calls from some career development researchers who "particularly welcome responses from readers reaching beyond their own — or their discipline's — traditional boundaries." (Defillippi and Arthur 1994, 321). Others researchers also claim that "future research should further explore career transitions in the context of general life events and experiences." (Peake and McDowall 2012, 407).

1.3 Study's Framework in the Integrated Master in Engineering and Industrial Management

The purpose of any College degree is to prepare the students for the working life. In fact, as in most degrees, the information for candidates to Integrated Master in Engineering and Industrial Management clearly states the professional opportunities that would be appropriate and likely available to graduates. Therefore, a study of the evolution after graduation contributes as a reality check for the expectations being created.

On the other hand, and probably more importantly, companies are made of people. Not only office workers and shop floor workers but also managers and executives. If we are to appropriately lead a company in any industry, we must appropriately manage its people. All these people have careers and make career decisions from their own point of view. If we are to manage them, we must understand at which point of their career they are. And if we want to think strategically in terms of the organization, we must understand where the people want to be, how they make decisions and whether we can help them getting there. This study proposed a tool that can be used to map and analyse this complex issue.

1.4 Particular Case Selection

This particular career was selected because: it does not appear to have one single major event or single characteristic of context or single characteristic of the individual explaining its development; it is diversified in terms of functions and environment, providing a variety of factors to be analyzed; and there was easy access to the Subject to clarify and explore details.

1.5 Research Questions

A particular point of interest is whether there were reasons for the career to develop as it did or if on the contrary its development was random.

Commonly, it is assumed that the more competencies one has developed, the most valuable a person is. Therefore, there is special interest in competencies as a determinant factor in careers.

The research questions are:

How did this particular career develop?

Why did this particular career develop the way it did?

Was this particular career moved by competencies that are created, or was the career a random walk?

The evaluation of the described career regarding its objective or subjective success is out of the scope of the present study.

1.6 Method of Research

1.6.1 Case study

We can define a case study as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident.”(Yin 2002, 13). This is absolutely the situation, as we

intend to create a global view of the career, and its separation from the context is a subjective decision.

1.6.2 Narrative

A narrative is an adequate starting point to describe a career and identify the key milestones, but more importantly it is a way to understand the underlying motives and mechanisms. “Career-related stories express the uniqueness of an individual and explain why he or she makes choices and explicates the meanings that guide those choices.” (Meijers and Lengelle 2012, 158). It also adds richness to the analysis as “the narrative approach is useful in itself to understand career plots [...] and individuals’ overall experiences, eliciting unplanned and chance events that may not be obvious or salient in a more traditional career discussion.” (Peake and McDowall 2012, 406)

For clarity, we will consider a story to be the subjective stream of events and narrative to be the objective presentation of the story. Therefore, the story will be embedded with emotions and judgment which hopefully will reveal more of the person whose career is being analyzed and her motives and reasoning rather than disguise the underlying motivations. Space for subjectivity will be allowed. This story is the centre of this study, because “through stories, individuals make meaning of their lives.” (Patton and McMahon 2006, 163)

1.6.3 Source of data

The research will be based mostly in qualitative information, like in typical case studies (Dubé and Paré 2003, 598): the story and the reviews from the Subject.

This type of qualitative material is commonly used and recognized source for assessment regarding careers. In fact, autobiographies are one of the four most popular methods of qualitative assessment (Patton and McMahon 2006, 164)

The story is based on two documents, the curriculum vitae and a testimony.

The curriculum vitae is the latest document prepared for job applications, dated of March 2012 with no editing whatsoever posterior to the beginning of the present study.

The testimony consists of the story told in the first person of the path that started before college education and stops at the present time. This text was written in the early stages of the study and as a separate task, in March 2012. The Subject has further contributed by reviewing this study and clarifying details of the testimony.

A comment from the Family of the Subject is included in Chapter 5 for triangulation of data.

For confidentiality reasons as well as for practical reasons, Bosses and Peers were not interviewed.

1.6.4 Methodology

As a first step towards objectivity, keywords were identified for each part of the testimony. This process was similar to the one used by Peake and McDowall (2012) when they identified the key issues in the narrative of the participants in their study.

In the narrative side, all subjectivity is removed in order to give a clear and rational view of the story. In consequence, we obtain an objective narrative of a subjective story.

To enable an open discussion, while keeping confidentiality and favouring generalization of the case, names of persons, organizations and places were replaced by descriptive terms.

The method of choice for describing the career was an adaptation of the Business Narrative Modelling Language. As previous researchers, “we used the [Business Narrative Modelling Language] and in so doing significantly decreased the time and effort necessary to make sense of the qualitative data gathered.”(Oliveira and Ferreira 2012, 5357).

The adaptations were made based on career development theories and models gathered from the Literature Review in Chapter 2. The result is a model that represents an objective narrative of a subjective story of the career. It visually represents the Actor (Subject), his traits, knowledge and External Factors interacting in successive places along a timeline.

Although Peers, Bosses and Family are also Actors, they are represented as External System components, coherently with the Systems Theory Framework of Careers, presented in Chapter 2.

As Assets, was considered the Knowledge created and used. The specific knowledge in the model is part of the identified keywords through the reading of the Story. The monitoring of the evolution of Knowledge will follow the Know-why/Know-how/Know-whom classification suggested by Defillippi and Arthur (1994).

Other keywords identified in the Story related either to Traits, Economical Environment or Luck.

Traits were analyzed using the Five Factor Model of Personality presented in Chapter 2.

According to Systems Theory Framework of Careers, Economical Environment was included in External Factors and Luck was considered a separate factor.

To sustain and ground the narrative, we introduce the dimension Ba. Ba represents the location where Knowledge is created, transformed or used. “Although it is easier to consider Ba as a physical space such as a meeting room, Ba should be understood as a multiple interacting mechanism explaining tendencies for interactions that occur at a specific time and space.” (Nonaka and Toyama 2003, 6)

In the final model, all these dimensions evolve and interact over a timeline.

1.7 Organization of the Document

The present first chapter was dedicated to an overall introductory view of the study.

The study effectively starts in the second chapter with the review of the literature related to each of the study’s sub-themes. In this chapter we gather the methodologies, theories and examples that will serve as tools for Research.

In the third chapter, research starts by presenting a simple prototype and quickly moves to the definition of all the pieces that will make up the model. This chapter closes with the construction of the model.

Chapter four takes a moment to check for the validity of the methodology.

In chapter five, the model is discussed in the framework of the research questions and at two levels of granularity: overall and detailed view. A brief application of the results of the analysis in the prediction of trends is also included.

The answers to the research questions are wrapped up in the Conclusions, which make up the chapter six. In this chapter are also included the identification of the limitations of the study, recommendations for further research. It closes with a review from the Family of the Subject and a final note from the Subject of this study.

2 Literature Review

After understanding what we propose to do, in this chapter we look at the state of the art. We intend to learn and systematize what of relevant has been said about the themes present in this study in order to better ground the subsequent research.

2.1 Literature Review Themes

The global theme of holistic visual descriptions of narratives of careers was decomposed into: career development and model building tools.

Literature review is a challenging task, as texts are sometimes not very well structured and some terms are conceptually misleading. The same problem was identified by Savickas: “Sure enough, the article continually used the phrase ‘career development’, but the article itself did not deal with this topic. I believe that the article dealt with educational and vocational choices not career choices; vocational behaviour not career behaviour, and barriers to occupational choice not career barriers.” (Savickas 2002, 382). And by Sullivan and Arthur: “Although there has been increased interest in the boundaryless career since the publication of Arthur and Rousseau’s book (1996), there is still some misunderstanding about what the concept means.” (Sullivan and Arthur 2006, 19)

2.2 Career Development

From the career development view point, the most discussed themes at present time are Career Identity, Theories of Careers, Boundaryless Careers, Protean Careers and Career Entrepreneurship

2.2.1 *Career Identity*

Traditionally, a career was a process of professional advancement, applicable only to professions where a formal hierarchy and progression was established. But nowadays, it is just the sequence of work experiences someone has over time. (Arthur and Rousseau 1996b, 3). Nevertheless “it is clear that upward mobility is still the norm, even when contrasting traditional to ‘new’ careers.” (Vinkenburg and Weber 2012, 592)

Career identity is a vision of the career path created by the self. As Meijers and Lengelle (2012) put it: “A career identity can be defined as a dynamic multiplicity of personal [...] positions or voices regarding work.” (Meijers and Lengelle 2012, 157). A particularly important detail in this view is that there is not only one I or one personal voice but many. “Although written by one person, the polyphonic novel is spoken by many ‘sub-personalities’ [...], characters or I-positions.” (Meijers and Lengelle 2012, 169).

A career identity can be considered as a specific view of part of a life story, which becomes important because “in order to exist in the social world with a comfortable sense of being a good, socially proper, and stable person, an individual needs to have a coherent, acceptable, and constantly revised life story” (Linde 1993, 3)

Meijers and Lengelle model, presented in Figure 1, shows the process through which career identity may be developed.

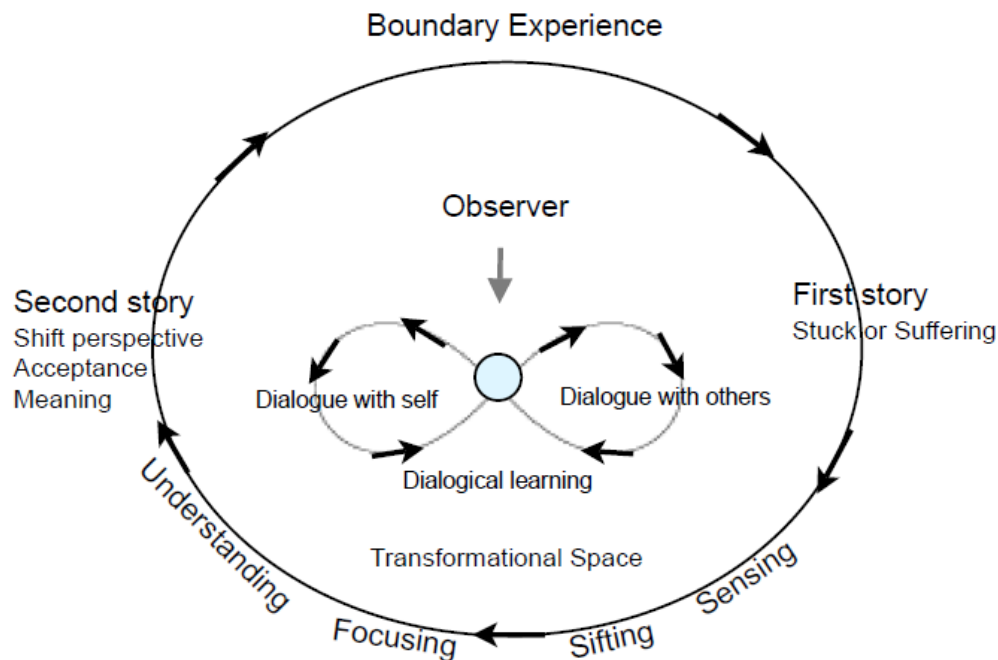


Figure 1 Dialogical Model of Career Identity Creation. (Meijers and Lengelle 2012, 170)

In creating the Career Identity, the different personal voices interact with each other (dialogue with self) and with other external individuals voices (dialogue with others) (Meijers and Lengelle 2012, 169). This is a kaleidoscopic process, as “at different times, on different occasions, and to different people, individuals give different accounts of the same facts and of the reasons why they happened”.(Linde 1993, 4)

This is not a monologue, but a true dialogue as “one is not simply free to construct a life story in any possible way.”.(Linde 1993, 7). In particular, the coherence of the story must be negotiated as “the speaker works to construct a text whose coherence can be appreciated, and at the same time the addressee works to reach some understanding of it.”(Linde 1993, 12)

It is through these two types of dialogues that learning about oneself happens.

The trigger of the process is a relevant event, a Boundary Experience. This may be a job loss as in Meijers and Lengelle (2012) study or another disruptive event. From the first interpretation of events, a First Story is created.

Afterwards, the dialogical learning and the passing through the four steps of cognitive learning enables the individual to create a second story. These four steps start with Sensing, when “emotions are explored and described.” (Meijers and Lengelle 2012, 169). Then, there is the Sifting or filtering stage, when the person starts to identify the most relevant issues, the patterns and causes to the observed effects. In the third step, Focusing, new conjectures are made and new viewpoints are explored. With Understanding, the fourth and last step, a new interpretation of events is established, giving birth to the Second Story.

It is in the move from the First Story to the Second Story that a transformational process occurs and the Career Identity is shaped or reshaped into a more empowering perspective

(Meijers and Lengelle 2012, 164). “The difference between the first and second stories is not absolute [as] the second story does not represent the creation of a completely different identity, but is rather the expression of an evolving identity.”(Meijers and Lengelle 2012, 163). This fact is illustrated with the example given by Linde (Linde 1993, 34), where a formerly considered retarded is “not only capable of reinterpreting his life story to fit his current circumstances, but [is also capable] of creating an explanation that harmonizes discrepancies and inconsistencies.”(Linde 1993, 34)

In an almost fatidic way, any part of a life story “is necessarily subject to revision and change as the speaker drops some old meanings and adds new meanings to portions of the life story.”(Linde 1993, 4)

2.2.2 Theories of Careers

2.2.2.1 Trait-and-Factor Theory of Careers

In its early developments, career theory was based in the Trait-and-Factor theory. According to this theory, the career problem is solved by matching the abilities and preferences to jobs that comply to the expected rewards and requisites. (Savickas 1997, 248).

This theory considered the self as the major influencing factor in a career, as if everything depended on the subject’s own decision. (Pryor and Bright 2003, 121)

“It was this approach, termed the trait-and-factor approach, that dominated career counselling for much of the twentieth century.”(Patton and McMahon 2006, 156).

2.2.2.2 Hall’s Model of Stages in Career Development

From its early stages, career theory took a fragmentized approach with each subject being studied separately. This trend continued until nowadays.

Hall was the first to integrate the different steps or phases of a career into a model (Pryor and Bright 2003, 121). Hall’s model is presented in Figure 2.

It was designed to organize the literature, not to analyze the career as a life-span process. It was nevertheless a novelty in the long run view of a career: “Although research has been done on individual stages, there has been no research to date to test this or other total life-span model of career stages” (Super and Hall 1978, 352)

Life and career were always considered to be interwoven and to unfold in similar ways. (Savickas 2002, 382). In the model of Figure 2, we can observe that life, through age, is one of the dimensions according to which career stages are organized.

The Identity stage refers to the first experiences in the working world, where the teenagers and early twenties try different jobs until they settle down. This phase is followed by Intimacy, a time when commitments are made. In the mid forties, the individual is emancipated and the career can grow, stagnate or plateau depending on organizational circumstances or personal characteristics. This model of sequence of stages does not leave much room to career changes or variations other than the ones based on context. This is a consequence of assuming that career evolution is predictable. In fact, at the time this model was built, a path started in early working life with a career choice, and then followed by job for life (Patton and McMahon 2006, 155).

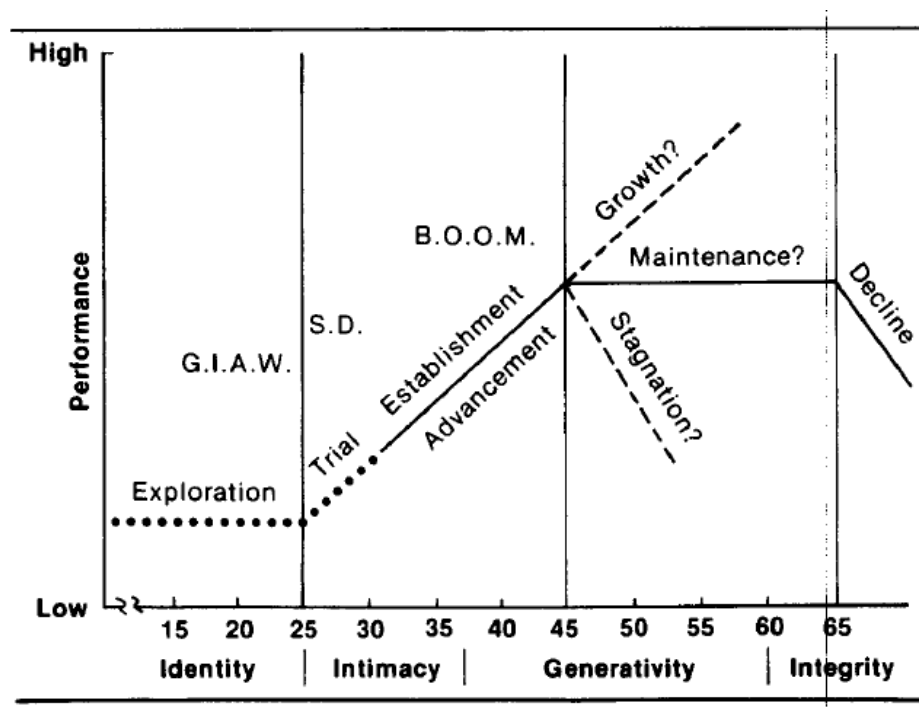


Figure 2 Hall's Model of Stages in Career Development. (Super and Hall 1978, 351)

2.2.2.3 The Systems Theory of Careers

Nowadays, there is no job for life and therefore the career theories adapted to take into account more complex individuals in a more complex world. (Patton and McMahon 2006, 156). "Indeed, theorists and practitioners alike have been challenged to be more holistic in their thinking." (Patton and McMahon 2006, 156)

The Systems Theory of Careers Framework came to answer part of these concerns. Its main innovation was taking into account the influence of external factors, including chance. However, just alike Hall's work, it "is not designed to be a theory of career development; rather it is construed as an overarching framework within which all concepts of career development described in the plethora of career theories can be usefully positioned and utilized in theory and practice." (Patton and McMahon 2006, 154).

Starting from the Individual System, containing his personal characteristics, the Systems Theory Framework also considers all factors capable of affecting it. (Patton and McMahon 2006, 154). The Individual System can be observed in the centre of Figure 3 as a dashed line limited circle. Also in dash lines, there is the External System and the outer circle of Time. The interrupted lines represent the fact that no system is closed and that factors influence each other. The external factor Chance is represented by the lightning crossing boundaries.

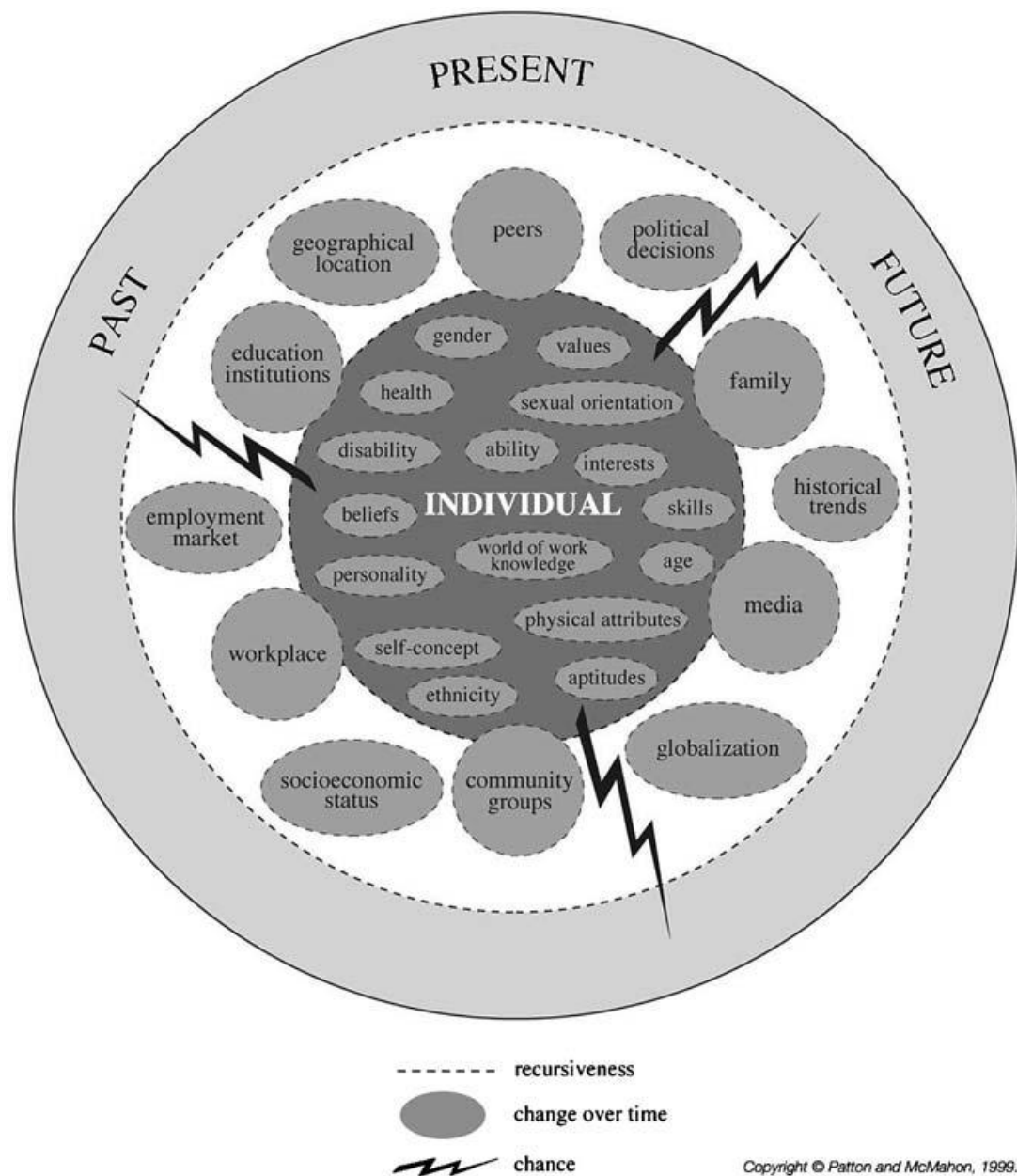


Figure 3 The Systems Theory Framework of Career Development (from Patton & McMahon, 1999). (Patton and McMahon 2006, 155).

2.2.2.4 Chaos Theory of Careers

One of the most recent and talked about systems theories is the Chaos Theory (Pryor and Bright 2003, 125). Several researchers have applied it to careers.

This theory has two key concepts: nonlinearity and recursiveness.

Nonlinearity means that the result can be more or be less than the sum of the parts. "A particularly impactful example was given by [an individual], who described a fortuitous encounter with restaurant patrons in the restaurant, who helped him to secure his first IT job." (Peake and McDowall 2012, 404).

Recursiveness means that the variables are influenced by each other. (Bright and Pryor 2005, 292).

Chaos Theory also “emphasises complexity and change. It is a systems theory approach in which complexity is acknowledged as contributing to the susceptibility of a system to change.” (Pryor and Bright 2003, 122).

A commonly summarization of Chaos Theory is that the “small differences can have major impacts on complex systems”. (Pryor and Bright 2003, 122). This is also the previously presented concept of nonlinearity.

However, Chaos Theory does not propose that everything is random. Instead, it proposes that it is difficult to make specific predictions.

To balance the unpredictability of complex systems, there is the notion of an end state to which systems tend to, the Attractors. (Pryor and Bright 2003, 122). Four types of attractors are considered: Point, Pendulum, Torus, and Strange attractors.

Point attractors refer to a system where the drive for movement is a single position or goal. An example of this type of attractor at work is an athlete preparing for a major competition. Pendulum attractors describe a system that moves between two positions regularly. In careers, an example can be the conflict between work and family time. Torus attractor represents a system that, although complex, is predictable. For example, “the ‘backroom’ technician who just wants to be left alone to do the assembly job he or she has always done” (Pryor and Bright 2007, 383). A system as complex as Torus but that is unpredictable is considered to be a Strange Attractor. This attractor self-organized, by repeating a pattern, just not exactly always the same pattern. An example is the use of both rationality and imagination in decision making. (Pryor and Bright 2007, 383).

Accepting that there are several factors that come into play while a career develops, is a fundamental prerequisite of Chaos Theory of Careers (Bright and Pryor 2005, 293), which is in clear contrast with the “traditional approaches of seeking causes or trying to explain behaviour in terms of one factor influencing another factor.” (Bright and Pryor 2005, 296). Chaos Theory of Careers has already been used to explain transition moments, their triggers, the moment of transition and the way order appears in chaos and from chaos giving place to a self-organizing process. (Duffy 2000, 233). The illustration for a specific case can be seen in Table 1.

Using the Attractors’ terminology, Peter was in a closed system that although complex is predictable. Peter was doing his job and expecting to reach more or less the same results day after day. The Torus attractor was in place.

In Peter’s case, the trigger for the transition was watching colleagues being promoted resulting in decreased enthusiasm toward his job.

After meeting with his supervisor he got overwhelmed by uncertainty and started to create order in chaos by taking the attitudes and actions he thought could help. It was when he decided to publish articles and instruct, that a new self-organizing process started by taking conscience of his skills, abilities and knowledge.

Table 1 Peter's case and Chaos Theory (Duffy 2000, 235).

Concept	Definition	Examples
Trigger event	Change in condition: a sense of urgency	Less enthusiasm toward job; colleagues being promoted
Chaotic transition	Uncertainty: ambiguity and unpredictability	Meeting with supervisor
Order in chaos	Order is found in behavioural responses	Submitting résumés; networking
Order from chaos	A new level of functioning is achieved	Creative problem solving in the form of publishing and instructing
Self-organizing process	A new way of knowing	A new way of knowing about skills, abilities, and knowledge based on reflection

This process can be compared to the Dialogical Model in four steps from Meijers and Lengelle (2012) described in Career Identity.

The Trigger is the equivalent to the Boundary Experience. Chaotic transition can be included in the Sensing stage. Order in Chaos corresponding to the Sifting stage. Order from Chaos equivalent to Focusing. Finally, the Understanding that creates the second story would correspond to the Self-organizing process.

2.2.2.5 *Boundaryless Careers, Protean Careers and Career Entrepreneurship*

Boundary used to mean limit, a line between the known and the hostile land. Nowadays, the meaning is quite different, it is a line to be crossed in careers or when complexity increases (Arthur and Rousseau 1996b, 29).

“Boundaryless careers, are the opposite of ‘organizational careers’ – careers conceived to unfold in a single employment setting.” (Arthur and Rousseau 1996a, 4).

There are six types of boundaryless careers: when the market place is not for separate firms but for a region, like in a Silicon Valley career; careers where marketability does not come from within the firm, as for carpenters or plumbers; careers sustained by a personal network of contacts, like in the case of real estate agents; careers that do not comply to traditional hierarchy and promotions; situations when the individual makes decisions based on issues that traditionally were put aside, as family; and a boundaryless attitude when the individual sees the career as boundaryless despite of the objective conditions. (Arthur and Rousseau 1996a).

Sullivan and Arthur (2006) have proposed that Boundarylessness is not something that either exists or not, but rather a grade that reflects the physical and psychological mobility.

Arthur and Rousseau (1996b) gave a fictional piece of advice from a manager to an employee that clearly shows the feel in a boundaryless career mode:

“Careers in today's world are what you make them. The apparent boundaries to this department are also your platforms for further opportunity. Organize your employment around your professional and social networks, and use those networks as

your link to the larger environment. Don't wait for formal training, but make sure the group of colleagues and collaborators you surround yourself with sustain new learning for you, and try to reciprocate for them. Transition to new ways is constant. Look after yourself, but don't be afraid to trust and to work to build trust around you. Be civil, and build reputation, in giving and taking help as change unfolds. Remember that who you are and what you achieve will always be embedded in your relationships with others."(Arthur and Rousseau 1996a, 38).

There are two main ideas that jump out of the text: self-responsibility and openness to others. In a boundaryless career world it is each individual's responsibility to make his own career, to turn limits into opportunities, to build professional and social networks, to use them to be linked to the outer world, to care for his training, to build trust, to build reputation, to take help.

Considering the focus on the individual, it is not a surprise that career identity "is considered essential in helping individuals to deal with the emergence of a boundaryless career" (Arthur, Khapova, & Wilderom, 2005), (Meijers and Lengelle 2012, 157).

In fact, what is being described in the above text might also be considered a Protean attitude, leading to a Protean career. Protean means that the career is managed by the individual, not by the company. The career consists of all the experiences related to work, occupations, training and education. The choices made link the experiences to form the career, which success results from inner judgement rather than external. (Hall and Moss 1998, 25).

Not only careers have been proving to be boundaryless but also the relationships that make part of today's boundaryless careers are changing and also span boundaries, just like in Arthur and Rousseau (1996a) piece of advice, relationships "influence one's ability to navigate a turbulent career context." (Higgins, Dobrow, and Roloff 2010, 765).

Furthermore, careers are not only self-directed, "but are also other-directed and in fact interdependent rather than independent from the relationships and employment context that envelop them." (Higgins, Dobrow, and Roloff 2010, 765).

Briscoe et al. (2012) studied the impact of a Boundaryless and a Protean attitudes in coping with uncertain environment. Boundaryless is clearly distinguished from Protean in the fact that the former will more likely seek external support, while the later will have a clearer identity awareness. (Briscoe et al. 2012, 314).

Nevertheless, the results confirm that both attitudes "may indeed help employees develop careers skills and ultimately cope with uncertain career environments." (Briscoe et al. 2012, 314).

Another term that is found in the literature is Career Entrepreneurship, which closely relates to Boundaryless and Protean attitude. Career entrepreneurs are characterized by using "unusual connections, going for new professional fields, and operating in transitional or unusual environments." (Korotov, Khapova, and Arthur 2011, 134). As in any other entrepreneurship venture, there are risks of something not turning out as expected. "Taking shortcuts, violating rules, and bypassing traditional learning steps can be exciting, but nevertheless dangerous." (Korotov, Khapova, and Arthur 2011, 134).

Finally, in a Boundaryless career, the individual is "no longer constrained by hierarchical advancement principles and thinking, individuals are free to pursue autonomous careers in which they can attain subjective career success." (Colakoglu 2011, 47).

2.2.2.6 *Other Career Considerations*

Realism vs. Constructivism

There are two main approaches regarding the relevance on career development of the individual view of the world: realism and constructivism (Pryor and Bright 2003, 122). Realism states that the world is an objective set of conditions, that can be known and that there are factors with a clear deterministic influence on careers. On the other hand, constructivism states that the world is what we understand of it, and therefore, the influences on careers are not objective facts, but our subjective view of them (Pryor and Bright 2003, 122).

The Influence of Chance Events in Careers

Chance events' impact on career development did not receive much attention from researchers, as "most career development literature has tended to emphasize the agentic propensities of individuals to make career decisions and to proactively construct their careers" (Bright et al. 2009, 14)

Chaotic patterns were very recently the object of study of Peake and McDowall (2012) which evaluated its presence in career transitions and its impact. "Several participants pointed to the role of luck, or being in the right place at the right time, as a contributing factor in their transitions, often yielding disproportionate impacts on their subsequent career paths." (Peake and McDowall 2012, 402).

A given example of a lucky break are "job offers emanating from social connections, whether they were friends, former or current work colleagues or lesser known social connections." (Peake and McDowall 2012, 402)

Other career influencing factors

Recently, researchers started to pay attention also to the impact of family and non-work related factors in careers.

For example, there is research studying the impact of the birth of a child, the birth of the first child in particular, or the impact of marriage. These are becoming working life changing events, rather than just life changing events. (Georgellis, Lange, and Tabvuma 2012, 471)

Another example is the study of the impact of a career side step, whether unemployment, family breaks, or educational leave. (Theunissen et al. 2011, e110)

2.3 Model Building Tools

Model building tools include competencies, narrative, narrative visual representation, Knowledge creation and traits.

As narrative is widely applied to research, there is little discussion regarding its absolute value. This is usually considered as given. On the other hand, there are some voices discussing its value in career, life-events and organizations analysis.

As the only approach found to represent narratives visually was the Business Narrative Modelling Language, this is also being reviewed. Other visual representation regarding specific themes within careers can be found in the literature review of Career Identity and Theories of Careers.

2.3.1 Competencies

Two types of competencies may be distinguished: capabilities and skills. A capability of a person is the ability of the subject to perform a specific activity. The distinction between a Capability and a Skill lays in the fact that a Skill is practiced or demonstrated to some measurable degree (Uschold et al. 1998, 50).

Competencies, either capabilities or skills are acquired through learning. Learning was traditionally associated to memory but nowadays is considered to be a multidimensional phenomenon, which “includes creation and acquisition of knowledge, collective processes for shared interpretation, and patterns of adaptation and transformation.” (Arthur and Rousseau 1996b, 32)

Therefore, another way to refer to competencies is as knowledge.

Knowledge creation process is similar to the Dialogical Model in four steps from Meijers and Lengelle (2012) described in Career Identity, or to the Chaos Theory of Careers transition from trigger to self-organizing process suggested by Duffy (2000). In fact, “knowledge creation is a transcending process through which entities, [...] transcend the boundary of the old into a new self by acquiring new knowledge.” (Nonaka and Toyama 2003, 3)

Knowledge can be grouped in three classes or ways of knowing: Know-why, Know-how and Know-whom. (Defillippi and Arthur 1994). These are shown in Table 2.

Table 2 The Three Ways of Knowing (Defillippi and Arthur 1994, 310)

Firm-based competency	Career competency derivative	Related career and human resource management approaches
Culture	Know-why <ul style="list-style-type: none"> • Identity • Values • Interests 	Socialization Team-building Organizational career development
Know-how	Know-how <ul style="list-style-type: none"> • Knowledge • Skills • Abilities 	Job analysis Job design Performance appraisal Training and development
Networks	Know-whom <ul style="list-style-type: none"> • Relations Intra-firm • Relations Inter-firm • Relations Professional • Relations Social 	Interpersonal relations Customer relations Mentoring programs

Know-why “answer the question 'Why?' as it relates to career motivation, personal meaning and identification.” (Defillippi and Arthur 1994, 308). Traditionally Know-why referred to the alignment between the individual and the corporate vision. Since the appearance of the

boundaryless career Know-why shifted from company driven to individual's interest driven. (Defillippi and Arthur 1994, 308)

Know-how refers to the ability, skill and knowledge to perform a specific job-related task. "Know-how competencies are reflected in individual job descriptions, and their development encouraged through individually-centered performance appraisal and training and development activities. (Defillippi and Arthur 1994, 309). Or, from another point of view, it refers "to the extent to which one develops a portfolio of transferable work-related skills, knowledge, and understanding." (Colakoglu 2011, 49)

Know-whom includes relations inside the firm, with people in other firms, either from a professional or social background. This way of knowing is often confused with a chance event. (Peake and McDowall 2012, 402)

The three ways of knowing have synergies among them. Know-how initiatives as entering a new training course will have a positive impact in Know-whom as new relationships will be developed with fellow attendees. And through increased Know-how, a new identity knowledge may be developed, improving Know-why. (Korotov, Khapova, and Arthur 2011, 129)

Knowledge is also improved by the experiences someone has, which challenge our assumptions and require us to react and re-construct our vision and identity. (Meijers and Lengelle 2012, 172). In fact, "experiencing a boundaryless career enhances career actors' opportunities to develop a deeper understanding of their self-identity and accumulate skills and knowledge that are transferable to other employment settings." (Colakoglu 2011, 56). In particular at the Knowing-why and Knowing-how level. (Colakoglu 2011, 56). Another report regarding expatriate experience states that this is "not only a disconnected occasion for cross-cultural anxiety and adjustment but also an important event in the process of self-development and learning." (Meijers and Lengelle 2012, 875)

These three classes of knowing may also be viewed as three classes of investment individuals make. (Korotov, Khapova, and Arthur 2011, 129). "Career investments are concerned with attaining greater career success, on our own terms, regarding why to go for a particular career opportunity, how to get that opportunity, and whom to know or contact to follow the opportunity." (Korotov, Khapova, and Arthur 2011, 129)

2.3.2 *Narrative*

As narrative is widely applied to research, there is little discussion regarding its absolute value. This is usually considered as a given. On the other hand, there are some voices being heard regarding its application in particular career issues.

For example, "we feel that the use of narratives is crucial in enhancing our understanding of the construction of careers and of the identity work involved in work role or career transitions, due to its emphasis on retrospective sense-making, and on identifying and seeing patterns." (Vinkenburg and Weber 2012, 605)

Even if the narrative ends up not expressing completely the reality, it can always be "taken as an indication of the personality, cognitive structure, social situation, or psychopathology of the speaker." (Linde 1993, 14)

The narrative may not develop in an exact time sequence, for example going back and forth. However, "the very notion of a life story requires a notion of sequence. [...] We feel

warranted in drawing certain kinds of conclusions from sequence that are impossible to obtain in the absence of sequence.” (Linde 1993, 13)

Narrative is not only useful in individual focused themes. Also “it is especially relevant to the analysis of organizational processes because people do not simply tell stories—they enact them.”(Pentland 1999, 711)

Similarly to the importance of sequence in life-story narratives, the timeline of a narrative for organizational studies is also relevant. “Rather than viewing organizations as static, homogeneous and consistent entities, narrative approaches demonstrate the processual characteristics of organizations.” (Rhodes and Brown 2005, 177)

Furthermore, subjectivity is assumed as part of the method which adds more information rather than decreasing the analysis value. (Rhodes and Brown 2005, 178).

2.3.3 Business Narrative Modelling Language

In this methodology, the organizational narrative is systematized, assuming a visual form that clearly identifies the actors and their interactions, the assets created and used along a time line. This way, the researcher can “address a number of issues which normally occupy a much more significant amount of time in qualitative research efforts.”(Oliveira and Ferreira 2012, 5356)

Considering that “we need to pay attention to all aspects of narrative—not just sequence.” (Pentland 1999, 721), the Business Narrative Modelling Language is an adequate methodology as on top of the time line, it also identifies the actors and assets.

2.3.4 Knowledge Creation

Knowledge is created in a certain context and depends on the specific time, place and existing relationships. “It needs a place where information is given meaning through interpretation to become knowledge.”(Nonaka and Toyama 2003, 6). To name this particular set of conditions, the term Ba will be used.

Ba means place, and here represents the location where Knowledge is created, transformed or used. “Although it is easier to consider Ba as a physical space such as a meeting room, Ba should be understood as a multiple interacting mechanism explaining tendencies for interactions that occur at a specific time and space.” (Nonaka and Toyama 2003, 6)

Therefore, Ba is inseparable from Knowledge creation.

Four types of Ba exist: Originating Ba, Interacting Ba, Cyber Ba and Exercising Ba, as represented in Figure 4..

Originating Ba is the most basic type of knowledge, which is created from the process of socialization between individuals. Individuals share their thoughts and acquire Knowledge from each other through proximity. “From originating Ba emerge care, love, trust, and commitment.” (Nonaka and Konno 1998, 46).

Interacting Ba is a result of interaction where individuals compare mental models, reflect over them and generate common terms and concepts. It is created in team or group environment transforming tacit Knowledge in explicit knowledge. (Nonaka and Konno 1998, 47)

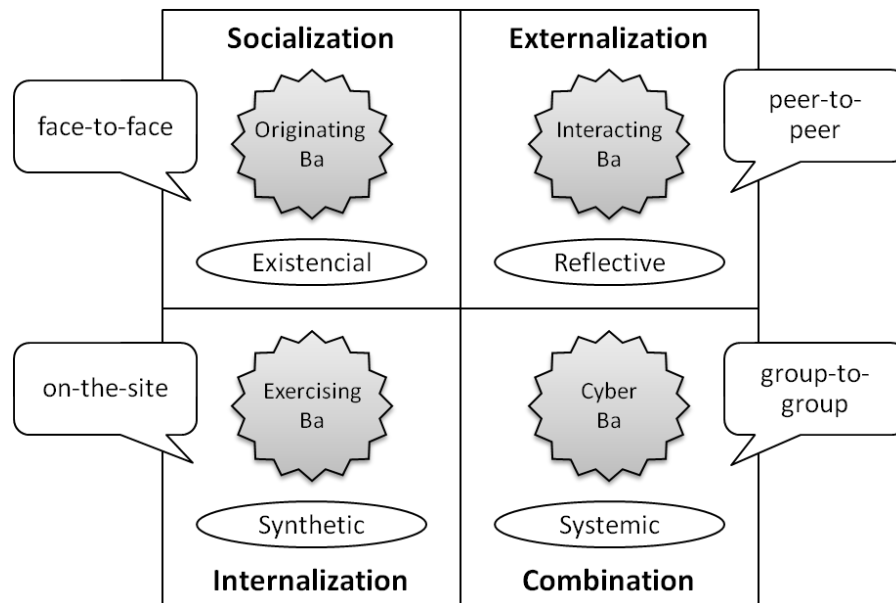


Figure 4 The Model of the Four Characteristics of Ba. (Nonaka and Konno 1998, 46)

Often using technology as a base, Cyber Ba combines explicit knowledge. It is the knowledge at the organization level. (Nonaka and Konno 1998, 47)

By the use of the organization explicit knowledge in the practice, Exercising Ba is generated. It reflects the internalization of knowledge through on-the-job-training, for example. (Nonaka and Konno 1998, 47)

2.3.5 Traits

There is a common sense meaning of traits as personal characteristics that are used to describe individuals. Traits can also be defined as “dimensions of individual differences in tendencies to show consistent patterns of thought, feelings, and action.”(McCrae and Costa 2002, 25).

It is particular relevant to identify one person’s traits and the intensity of that traits, as the “more of a trait people have, the more likely they are to show the behaviour it disposes toward, and thus the more frequently we are likely to see it.[] Frequency and intensity of the appropriate acts and feelings are the major signs from which we infer the level of a trait.” (McCrae and Costa 2002, 25).

However, the traits are dispositions. They do not determine human behaviour but do help to explain it. The context where we stand, our mood and experiences may alter the reactions and actions we take.(McCrae and Costa 2002, 26)

There are several classifications of traits in the literature. The Five-Factor Model is currently “accepted as an adequate taxonomy of personality traits and literature reviews are now routinely organized by classifying measures along [its] lines”. (McCrae and Costa 2002, 3).

The Factors are Neuroticism, Extraversion, Openness to Experience, Agreeableness and Conscientiousness. By grouping some Facets of personality, these Factors are the characteristics or dispositions that “endure through adulthood and help to shape emerging lives.” (McCrae and Costa 2002, 3). The grouping of Facets into Factors is shown in .

Table 3.

In particular for entrepreneurs, there is good evidence that personality traits not only influence considerably their goals and the way they think and act, but also what they achieve. This is particularly evident for entrepreneurs because this role gives them more freedom to act according to their will and change their environment. (Brandstätter 2011, 229)

In relation to the Big Five Factors, entrepreneurs when compared to managers have substantially higher Openness to Experience and Conscientiousness, higher Extroversion, lower agreeableness and neuroticism. (McCrae and Costa 2002, 227).

Table 3 The Five Factor Model of Personality (McCrae and Costa 2002, 4)

Factor	Openness to Experience	Conscientiousness	Extraversion	Agreeableness	Neuroticism
Traits or Facets	Down-to-earth vs. Imaginative	Negligent vs. Conscientious	Reserved vs. Affectionate	Ruthless vs. Soft-hearted	Calm vs. Worrying
	Uncreative vs. Creative	Lazy vs. Hardworking	Loner vs. Joiner	Suspicious vs. Trusting	Even-tempered vs. Temperamental
	Conventional vs. Original	Disorganized vs. Well-organized	Quiet vs. Talkative	Stingy vs. Generous	Self-satisfied vs. Self-pitying
	Prefer routine vs. Prefer variety	Late vs. Punctual	Passive vs. Active	Antagonistic vs. Acquiescent	Comfortable vs. Self-conscious
	Uncurious vs. Curious	Aimless vs. Ambitious	Sober vs. Fun-loving	Critical vs. Lenient	Unemotional vs. Emotional
	Conservative vs. Liberal	Quitting vs. Persevering	Unfeeling vs. Passionate	Irritable vs. Good-natured	Hardy vs. Vulnerable

3 Research

Having learnt about the themes that are relevant to this study, research can start.

Firstly, the story is stripped of its subjectivity by identifying keywords from the source data. Secondly, the Business Narrative Modelling Language is adapted by incorporating the learning from Literature review. And finally, the model for the specific case is built.

3.1 The Subject

The person whose career is being studied was not an object of study per se. Although the personal characteristics of the individual do surface, they are not part of the study. Rather, we are interested in the abstract influence of factors.

3.2 The career

The purpose of this case study is to describe a particular career path of an engineering graduate that crosses country boundaries, industries and functional areas during more than 15 years of working experience.

The story of the career is based on two documents, the curriculum vitae and a testimony.

The curriculum is the latest document prepared for job applications, dated of March 2012, with no editing whatsoever posterior to the beginning of the present study. The testimony consists of the story told in the first person of the path that started Previous to College and stops at the present time. This text was written in the early stages of the study and as a separate task, in March 2012.

The story was divided in phases:

- a) Previous to College
- b) College
- c) First Job
- d) International Experience
- e) MBA
- f) Portuguese Company
- g) First Business
- h) Back in the Race

3.3 A Prototype: Hall's Model of Career Stages

As a first approach to the description of the career, and in order to try to better understand it, Hall's model was built and is presented in Figure 5.

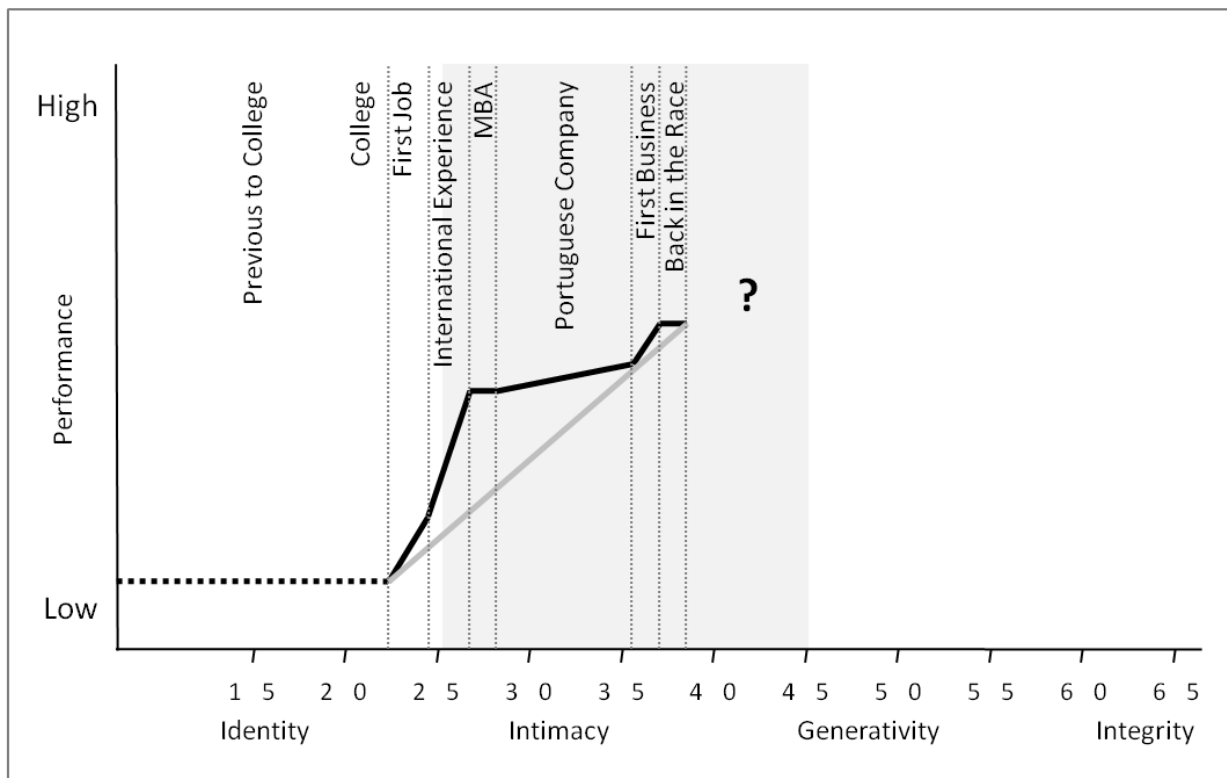


Figure 5 Career representation using Hall's model

The performance is considered to be stable until the 22 years of age, when college was completed and the first working experience took place. There was a good development during the two years in First Job, and an even better progression at the job in International Experience. During MBA phase, performance is assumed to be kept at the same level, taking up slowly in the Portuguese Company phase. During this last period there was no consolidation of a functional position but there was knowledge building up and formal promotions that justify the small increase in performance registered. The entrepreneurship period is considered to be of great growth and therefore increased performance. Back in the Race is very recent and therefore no increase in performance was considered.

The specific career does not fit exactly in the model, as college education has delayed work life from teen to early twenties. On the other hand, the irregular path from twenties to nearly forties is coherent with the trial and error phase that the model considers.

The conclusion to be taken from observing the model is that all is open for the future as the 45 years of age, the time when according to the model career discontinuity happens is still ahead.

It does not help, as it is not meant to, in understanding the factors behind the career development.

3.4 The Model of the Career

The Business Narrative Modelling Language was used as a methodology to identify the factors behind this career development. As it was designed for organizations, some adaptations had to be made to adequate it for a career analysis.

The process followed was:

- a) Story Analysis
- b) Selection of Dimensions
- c) Definition of Grades
- d) Building the Model

3.4.1 Story Analysis

The story had been written in phases that coincide with the sequence of places where work life developed.

Each one of these places is considered Ba, the place where knowledge is created.

For each paragraph of each Ba, a first set of keywords was identified. They represent the ideas behind the words, the knowledge created, the actors, the factors of influence or the spirit of the text. Being a subjective exercise, part of the information did not come directly from the text but also from the emotions that came to mind when reading it. These keywords were reviewed by the Subject.

The use of the feedback of a subject directly involved in the issue being studied is not new. In fact, in one of the studies applying Business Narrative Modelling Language, we can find an example: “Another aspect which made the interviews rather unique is that the interviewees were asked to help map out the interactions between the internal and external organizational actors.”(Oliveira and Ferreira 2012, 5346)

There were 179 labels, 97 distinct keywords, distributed along the time line, as seen in Figure 6.

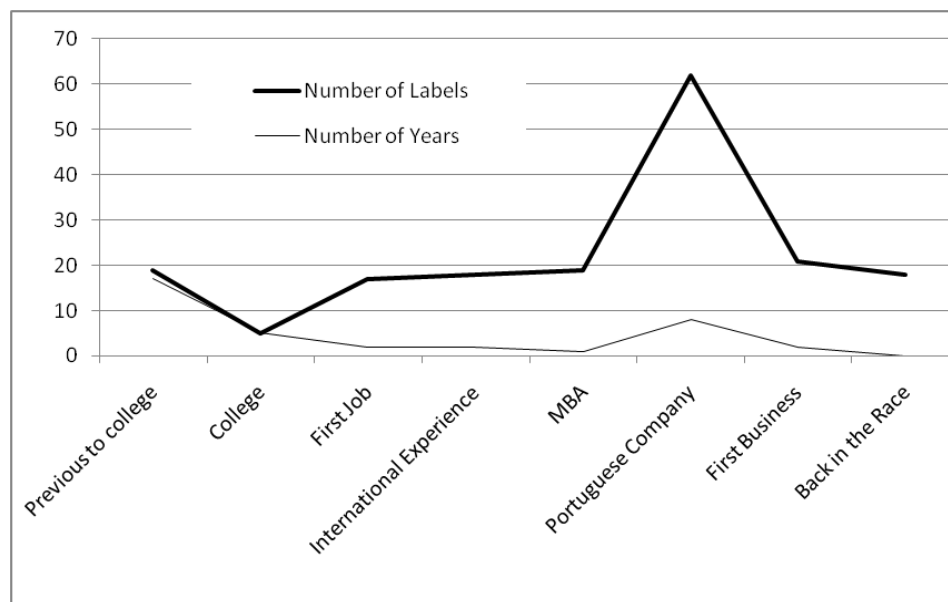


Figure 6 The distribution of labels per Ba

Interesting enough, the number of labels seems to be somewhat related to the number of years spent at each Ba, as it can be observed in Figure 6. Although this was not a deliberate effort, it does give some comfort that the label attribution makes sense in a macro analysis.

The most frequent keyword was Pride, appearing 15 times, and 64% of the keywords were only mentioned once. The distribution is a 30-60 Pareto, with 30% of the keywords representing 60% of the total number of labels. Distribution is presented in Figure 7.

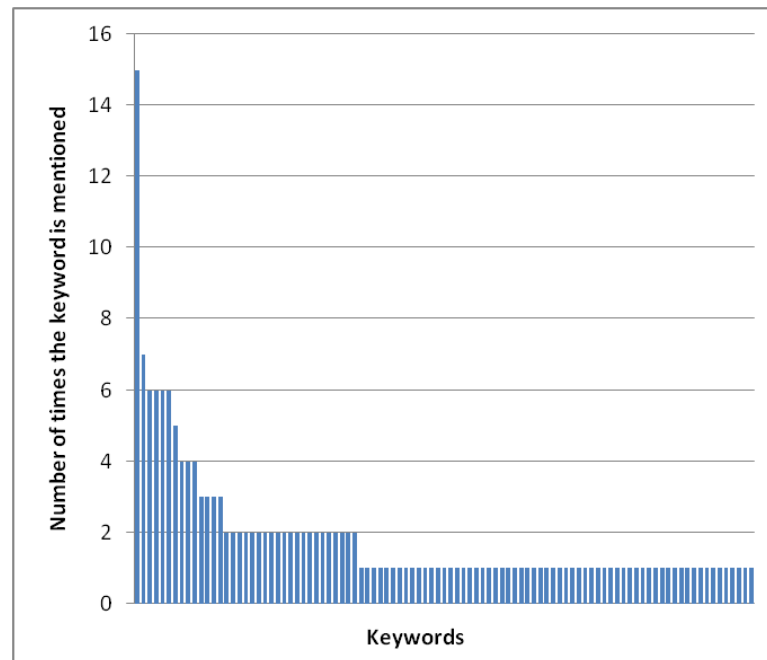


Figure 7 Frequency of each keyword

3.4.2 *Selection of Dimensions*

According to Business Narrative Modelling Language, there are Actors or Roles, Assets being built or used, a timeline, and Patterns.

In our career story, there are clearly identified Actors, which include the Subject, Bosses, Peers and Family. These last three according to the System Theory Framework of Careers are part of the External System. Therefore these will be considered as so in the model.

Knowledge created and used in a career is the equivalent to Assets being built and used in an organization. Furthermore, we can divide it according to the three types of knowing: Know-why, Know-how and Know-whom.

The timeline is also delimited and meaningful as it represents a sequence of Ba.

Patterns in an organization may be interpreted as personality Factors in an individual career. Patterns in an organization refer to a particular stage or function, and Factors refer to particular set of traits of the individual.

Two very important components in the System Theory Framework of Careers need also to be accommodated, even if there is no clear equivalent in the Business Narrative Modelling Language: External System (Actors other than the Subject, and Economy) and Luck.

Table 4 summarizes the adaptation made.

Table 4 Proposed Model in comparison to Business Narrative Modelling Language and the Systems Theory Framework of Career Development.

Business Narrative Modelling Language	Business Narrative Modelling Language adapted to a career story	Systems Theory Framework of Career Development
Actors or Roles	Subject	Individual System
	Bosses, Peers, Family	External System
Assets being built and used	Knowledge being created and used: Know-why, Know-how, Know-whom	Individual System
Timeline	Sequence of Ba	Time
Business Patterns	Traits	Individual System
Not Applicable	Luck	Chance
Not Applicable	Economy	External System

Each keyword was then reviewed to match each of the key components of the model.

3.4.3 Definition of Grades

3.4.3.1 Sequence of Ba

Following the nature of the story and its structure, the sequence of Ba is the following:

- a) Previous to College
- b) College
- c) First Job
- d) International Experience
- i) International Experience
- e) MBA
- f) Portuguese Company
- g) First Business
- h) Back in the Race

Previous to College does not refer to a specific physical place but to the home and family environment.

College refers to the psychological place related to college, including the time at college and out of college but under the range of academic experience.

First Job was in a large and technological company in Porto where traineeship was taken, leading to the first work contract (circa 2 years).

International Experience includes the whole experience of living and working in London (circa 2 years).

MBA refers to the business school where the Subject attended a one year full-time Master in Business Administration and the environment surrounding school.

Portuguese Company represents the eight years experience in a large Portuguese company with a broad range of businesses.

First Business refers not only to the company itself but also to the work done previously in preparation to the launch.

Back in the Race refers to the experience at a start-up company in the digital market.

The sequence of Ba is represented from left to right according to the timeline.

Using the model from Figure 4, the type of knowledge activated in each phase is also identified.

3.4.3.2 Actors

The only Actor in the model is the Subject of the career being studied.

3.4.3.3 External Factors

Four External Factors were considered: Bosses, Peers, Family and Economic Environment.

Bosses do not represent a specific boss, but the boss or supervisor at the time. Peers refer to co-workers or fellow students. Family means the family sphere as a whole, including parents and grandparents, siblings, partners and children.

Along the 15 years where the career develops, the economical environment has varied considerably. It represents the overall conditions as expected economic growth, free movement of people and job opportunities.

3.4.3.4 Knowledge

The three ways of knowing were used to classify the different types of knowledge identified in the story. Each specific area of expertise has its own timeline where the creation of knowledge is identified by an empty circle and the use of that knowledge is identified by a full circle.

3.4.3.5 Traits

Individual traits are represented using the taxonomy of the Five Factors Model of Personality: Neuroticism, Extraversion, Openness to Experience, Agreeableness and Conscientiousness.

Accepting the impossibility to have an exact evolution on these Factors, but considering the interest in obtaining an estimate, a simplified method was used to capture its overall spirit. For each Facet and each Ba, the Subject was requested to evaluate it as recalled in a scale from 1 to 5.

For example, for Late/Punctual Facet in Conscientiousness Factor: In First Job was the Subject late (1), punctual (5) or something in between?

Then, the evaluation for each of the six Facets of each Factor was summed up to make the scale of each Factor (from 6 to 30). The resulting evolution is presented in Figure 8.

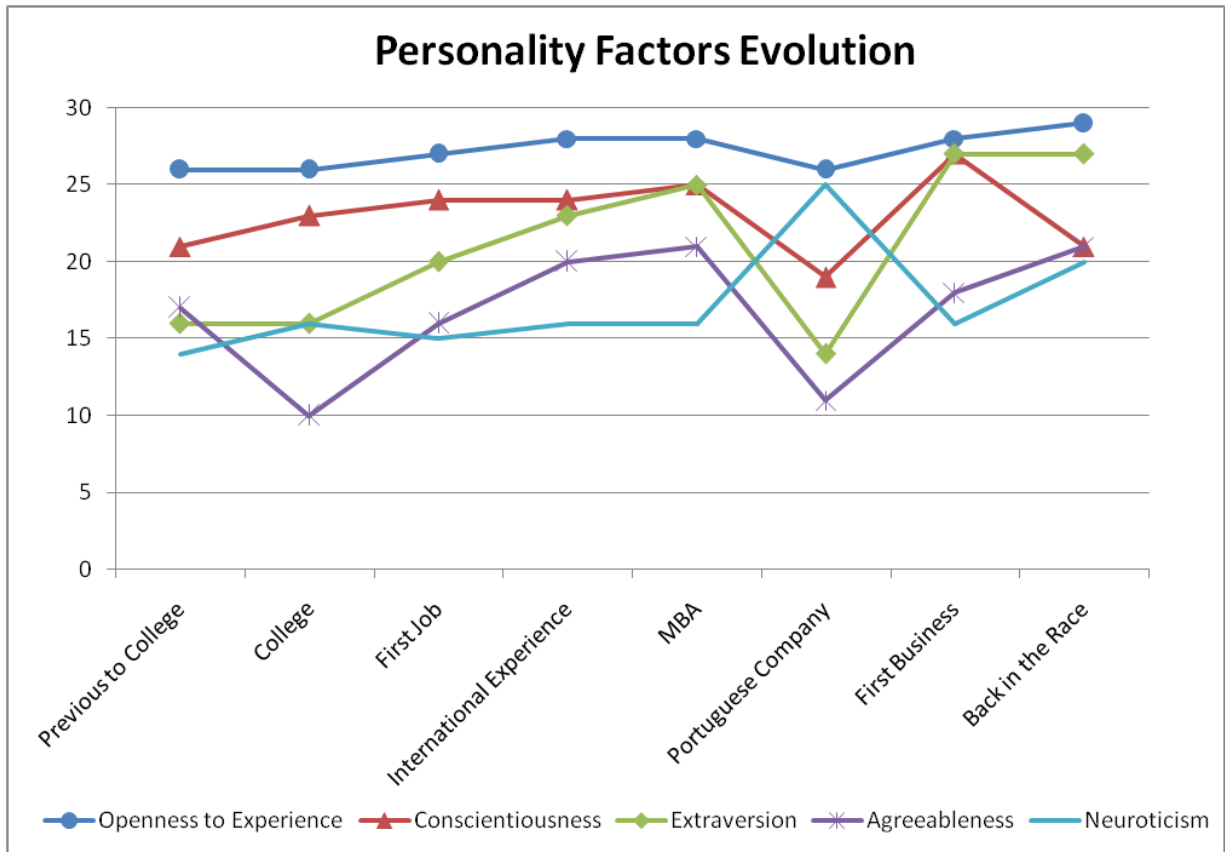


Figure 8 Personality Factors Evolution.

From reading Figure 8, we can see that Openness to Experience is the most present personality Factor and also the most stable. Excluding the high value during Previous to College in terms of agreeableness, we can observe a stable trend in all Factors until the MBA phase.

The experience in Portuguese company caused a disruption in all Factors, all being negatively affected.

The First Business phase brought all personality Factors to the previous trend.

In addition to the assessment of Factors, and to check consistency, keywords referring to traits were reviewed to identify the Facet and Factor that most closely relates to it. From the 127 trait keywords occurrences, 48% related to Neuroticism. The complete distribution can be observed in Table 5.

Table 5 Distribution of trait related keywords per level of each Trait

	Lower	Higher	Total	%
Agreeableness	1	5	6	5%
Conscientiousness		16	16	13%
Extraversion	8	15	23	18%
Neuroticism	36	25	61	48%
Openness to Experience	2	19	21	17%
Total	47	80	127	100%

Re-scaling the number of traits obtained in this way, the estimate distribution is presented in Figure 9.

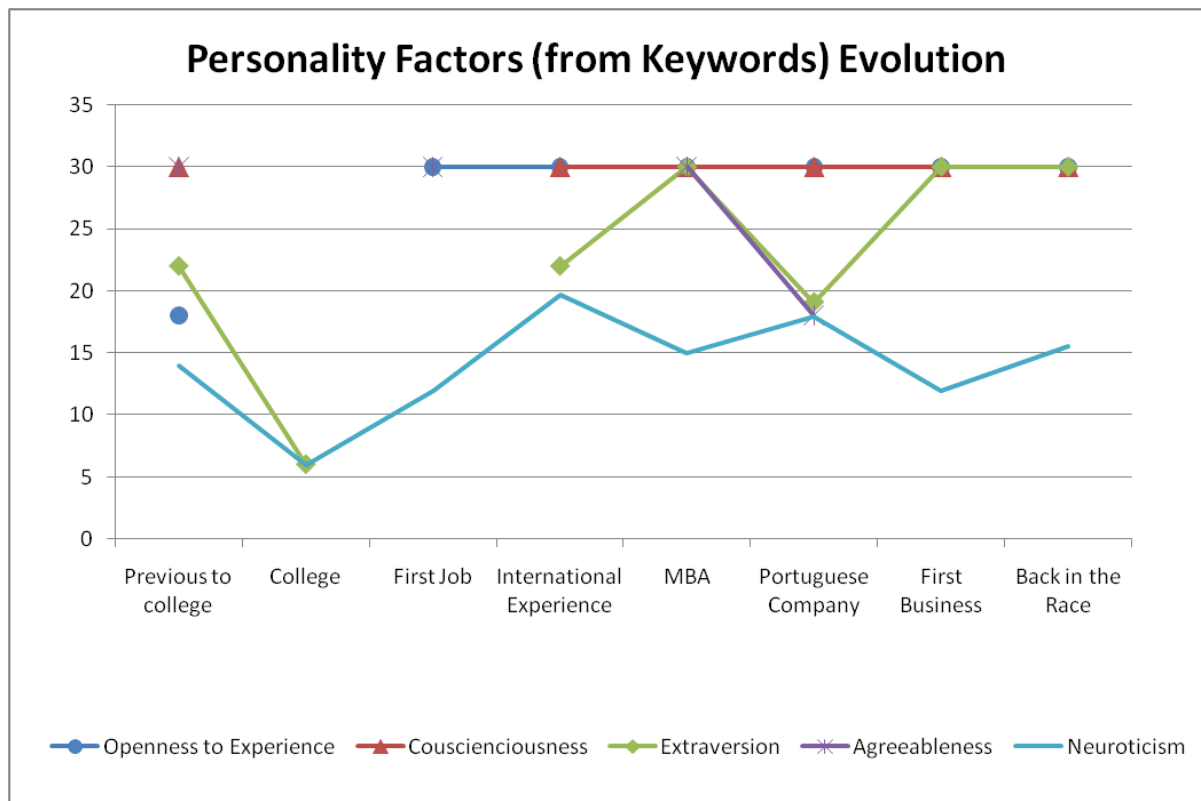


Figure 9 Evolution of Personality Factors identified in the Keywords

Results are not as consistent as the ones obtained from the direct assessment, as not all Facets appear in the keywords and the ones that do appear are not in the proportion of 1/6 % for each Factor.

We may nevertheless observe that: there is some similarity in the behaviour of Extraversion and Agreeableness around the Portuguese Company phase; Openness to Experience and Conscientiousness are also the most present personality Factors.

3.4.3.6 Luck

Although Luck is a factor that influences all other dimensions, we are mainly interested in its impact on the Subject.

The moments where Luck was identified were at the beginning of First Job, by the end of International Experience, in Portuguese Company, in the beginning of First Business, and once in Back in the Race.

3.4.4 Building the Model

Putting together all pieces of information, we obtain a representation with four major areas corresponding to parts of the Systems Theory of Career: Luck, External System, Individual System and Ba.

Luck will be represented not as it appears in the System Theory Framework of Careers, but as an additional line that influences the Subject in a similar way to External Factors.

External System is in our model characterized by the Economy, Peers, Bosses and Family. Any of these influence the Subject.

The influences from Luck and External System are represented by arrows from the influencing to the influenced entity.

The nature of the interaction of External System components is expressed through signs that represent support, stress, learning, decision factor and recognition.

Individual system is made of the Subject, Traits of the Subject, and knowledge of the Subject. The Subject is represented through a straight line with which External system interact.

Traits have its Five Factors' scores represented individually.

Knowledge is divided in Know-why, Know-how and Know-whom, each represented along straight lines. Knowledge creation is represented through hollow circles, and knowledge usage through full circles. Where knowledge creation is a direct consequence of an external factor, that relationship is represented through arrows.

For Know-whom, its usage is linked to its creation.

The activated type of knowledge creation is identified just below Ba sequence, by darkening the quadrant in the Model of the Four Characteristics of Ba.

The final model is presented in Figure 10.

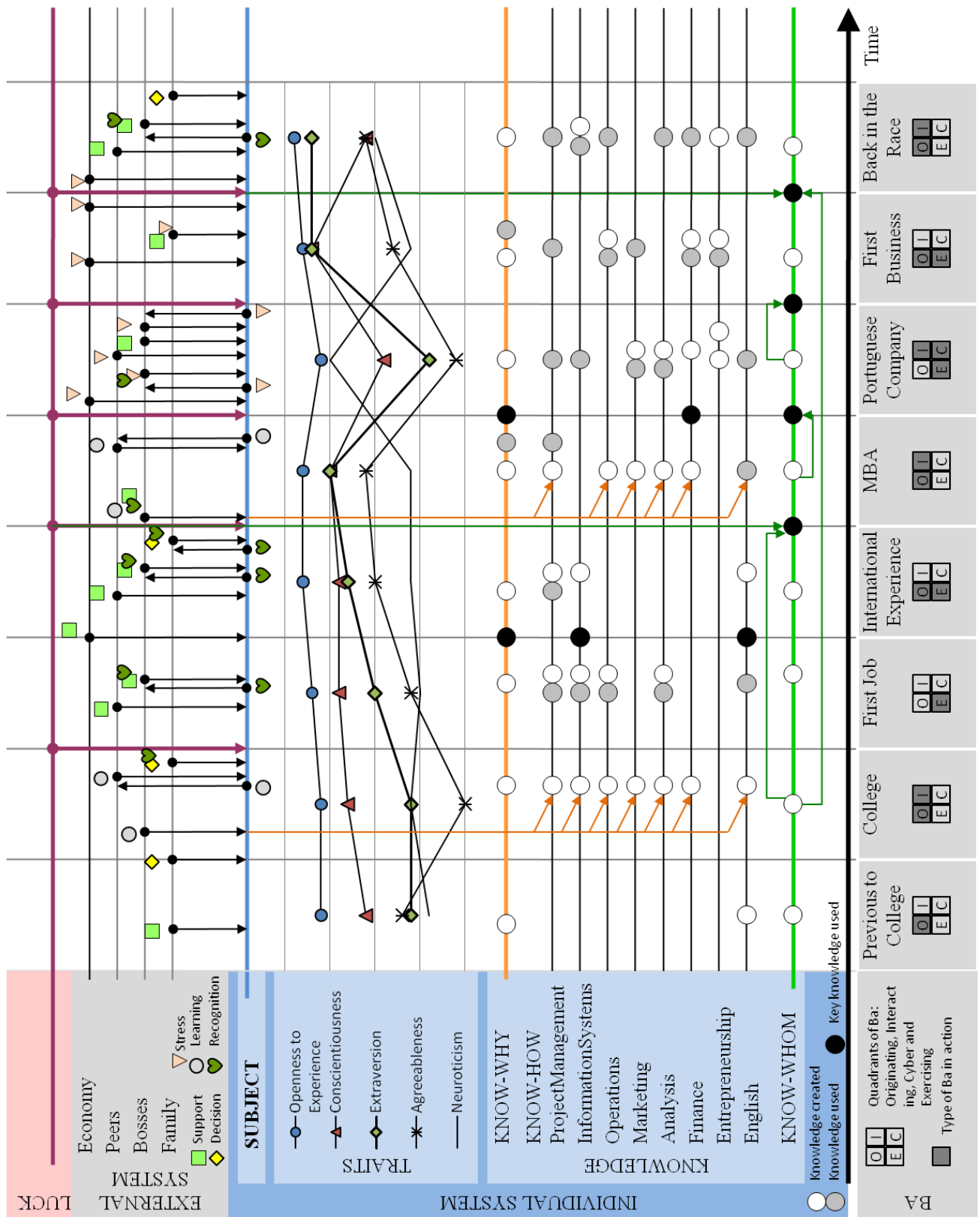


Figure 10 Career Model using an adaptation of the Business Narrative Modelling Language

3.5 Validation of the Methodology

The validity of the present case study is a concern, in particular considering that it is expected to be a basis for further research. Therefore, an assessment was made using as reference the work developed by Dubé and Paré (2003) for verifying the rigor of case studies. This work was specifically for Information Systems Case Studies, but it adapted well to the narrative case study analysis.

Table 6 Validity Assessment (Dubé and Paré 2003, 606).

Attribute	Analysis	Assessment
Research Design		
Clear Research Questions	As the present study is in its essence descriptive, a research question has a limited interest. In fact, in their study, Dubé and Paré (2003) have realized that only 29% of descriptive case studies do state a research question. Nevertheless, in this case the research questions are stated in the Introduction.	Ok.
A priori specification of constructs and Clean theoretical slate	This study is starting from the identification of factors that may influence the development of the career, but no hypothesis are being made on the real influence. Therefore, we follow the recommendation of “early identification of possible constructs can be helpful” (Dubé and Paré 2003, 607) and “theory-building research must begin as close as possible to the ideal of no theory under consideration and no hypotheses to test”. (Dubé and Paré 2003, 607).	Ok.
Theory of Interest, Predictions from Theory, and Rival Theories	These attributes are more relevant for explanatory case studies, which is not the main nature of the present study. Nevertheless, in literature review, different theories of careers are presented.	Ok.
Multiple-Case Design, Nature of Single-Case Design and Replication Logic in Multiple-Case Design	As stated in the Introduction, there are few examples of life-span careers available and researchers “particularly welcome responses from readers reaching beyond their own — or their discipline’s — traditional boundaries.”(Defillippi and Arthur 1994, 321). Therefore, this single-case is relevant. The reasons for choosing this particular case are also stated in the Introduction.	Ok.
Unit of Analysis	In this case-study clearly the unit of analysis is the career.	Ok.
Pilot Case	Before the construction of the model, the specific career was represented in the existing Hall’s model which served as a pilot for the more holistic final representation.	Ok.
Context of the Case Study	The timing of data collection is clearly stated in the Method section of the Introduction.	Ok.
Team-Based Research and Different Roles for Multiple Investigators	This is a single investigator study. There was nevertheless the valuable contribute of the supporting teacher from FEUP.	Ok with reservations.
Data Collection		
Elucidation of the Data Collection Process	This process is described in the Method section of the Introduction.	Ok.
Data Triangulation	The use of three sources of information, as referred in the Method section of the Introduction provides some triangulation, although not as much as desirable.	Ok with reservations.
Case Study Protocol and Case Study Database	The original sources of information are not included in the present document but are held by the author.	Ok.
Data Analysis		
Elucidation of the Data Analysis Process	For each analysis presented, a short description is included regarding the process that was used.	Ok.
Field Notes, Coding, Data Displays, and Flexible and Opportunistic Process	Some information regarding coding is presented but particular details are omitted and kept with the original data sources.	Ok.
Logical Chain of Evidence	The sequence from literature review, through research and to conclusion is expected to show a clear and logical process to the reader.	Ok.
Codes of Analysis: Empirical Testing, Explanation Building, and Time Series	This study uses explanation building, found in the Discussion chapter.	Ok.
Searching for Cross-Case Patterns	Whenever possible, data was tested for consistency. An example is the traits that were the object of a direct assessment, but also verified through the translation of keywords.	Ok.
Use of Natural Controls	Not applicable, as this is a mainly descriptive study.	Ok.
Quotes	The voice of the Subject is included in the Discussion chapter.	Ok.
Project Reviews	The Subject has reviewed all the observations and conclusions to assure its accurate interpretation and reasonability.	Ok.
Comparison with Extant Literature	Not applicable, as this is a mainly descriptive study.	Ok.

The goal is to guarantee that this case study has “the attributes that leading case research methodologists have identified as contributing to rigor in such research.”(Dubé and Paré 2003, 599). From the analysis of each attribute, which is presented in Table 6, we can conclude that this study followed the procedures and methods recommended for a rigorous case study.

4 Discussion

Having taken a moment to validate the methodology, and being now confident of its rigor, we can move forward.

We restart from the model of our case, built in the research phase with the use of the learning from the literature review and applied to the particular career being studied.

The source of information was previously characterized in terms of keywords but the testimony and curriculum vitae have been omitted. For clarity and illustration of the analysis, evidences from the testimony are now provided in italic.

Next step is the discussion, where the answers to the three research questions are prepared. The final answers are given in the Conclusions chapter.

4.1 Generic View

From the model presented in Figure 10, we can immediately see the story unfold, allowing for preparation of a complete answer to the first research question:

How did this particular career develop?

In a first high level reading, we can observe that:

- 1) There was stability in the evolution of personality Factors until the Portuguese Company stage. This seems to be a Boundary Experience according to Meijers and Lengelle (2012) model, or a Trigger according to the Chaos Theory of Careers.
- 2) Although Portuguese Company disturbed the trend of previous years, the system did bounce back to a situation similar to the previous position. This is consistent with the Chaos Theory of Careers where the favourable evolution of personality Factors may be considered a Point Attractor.
- 3) Luck appeared along the career, supporting transitions:
Pure luck in transition from College to First Job, where it is the only factor influencing the transition.
In other cases, Luck is associated with the Know-whom usage. This is coherent with Peake and McDowall (2012) report of Know-whom usage being often confused with Luck.
- 4) Two stages have a more concentrated creation of Know-how: College and MBA.
- 5) Know-whom was created along the career but only in the second half was it used consistently. Sometimes there is a large distance between creation and usage.
- 6) Ba based model of knowledge creation shows that the type of knowledge varied considerably. Combined Ba only appears in Portuguese Company. Exercising Ba appears in all job positions except in the Back in the Race.

This is in fact a Boundaryless career, matching two of the six types of Boundaryless careers. For three times, the Subject made decisions based on issues traditionally put aside (Family). Additionally, the Subject saw the career as boundaryless despite objective conditions:

“At [Portuguese Company], I just felt free to experience all the variety of areas where the company operated. In reality, it was not exactly so.”

The Subject adopted a Protean and Career Entrepreneurship attitude. The Subject was not “constrained by hierarchical advancement principles and thinking” (Colakoglu 2011, 47). The Subject used connections, took risk, which sometimes resulted positively others negatively.

4.2 Detailed Analysis

Going into the detail of the model, we can prepare the answer to the second question:

Why did this particular career develop the way it did?

4.2.1 Transitions

1) To College: **Family**

The transition to the specific College was influenced by the Family: In fact, we can take from the testimony that:

“Good in mathematics and natural sciences, I considered engineering as a natural choice for college. This preference was further stressed due to my father’s education.”

2) From College to First Job: **Luck**

This was not a result of competences, but mainly a strike of Luck:

“I really wanted to stay in the company where I did my traineeship, but my boss chose another colleague of mine. For my surprise, she decided not to accept it and in consequence I was invited as a second choice.”

3) From First Job to International Experience: **Know-how + Know-why + Economy**

Economic environment is favourable and Key Know-how created the opportunity. Know-why, together with favourable personality Factors, provided the motivation:

“It was a simple decision, I just wanted to go. And it did not seem to be such a big move, just like moving to Lisbon....”

4) From International Experience to MBA: **Luck/Know-whom + Family**

The return to Portugal and the decision to do the MBA was influenced by family concerns:

“Changes in personal life [...] created a desire for a change. The decision to come back to Portugal was quick and clear in my head.”

There was also Luck related to the use of Know-whom:

“When I came back to Porto, I wanted to start a business, but I wasn’t prepared. Then I wanted a job but somehow it did not feel right. I happened to come across a good old friend who was going to start an MBA. And that sounded just right for me!”

5) From MBA to Portuguese Company: **Luck/Know-whom + Know-how + Know-why**

For the first time we see the combined use of the three types of knowledge in a transition. This was an difficult transition to perform. In fact, from the testimony:

“I had a few doubts. But the fact that the job was in Planning and Control, exactly the area I was interested in moving into, and the conscience that if I did not make that move at the point of finishing the MBA I would never be able to do it, made me accept it.”

6) To First Business: **Boss + Peers + Luck/Know-whom**

Considering the Stress marks appearing in the Portuguese Company stage, it seems that increasing discomfort was the Trigger for change. A moment of support from Bosses interrupted the situation of Stress, but not for long. If in Portuguese Company the Boss had not changed again from a supportive to a stressing one, maybe the change to First Business had not happened. Luck was present through the use of Know-whom:

“It was an acquaintance of a friend who came up with the opportunity.[...] I was going to open business with my friend, but then she moved and I was left with the baby project on my arms”.

7) From First Business to Back in the Race: **Economy + Luck/Know-whom**

Economy was the main factor:

“Portuguese economic situation was really tough, it just drove me out of business.”

But Luck appeared again under the form of Know-whom, the Subject recovered Agreeableness and a supportive environment.

4.2.2 Individual System

4.2.2.1 Personality Factors

The most present personality Factor both in score and in stability is Openness to Experience. It favours frequent changes. Conscientiousness and Extroversion are also quite high. Lower results are seen in Agreeableness and Neuroticism.

This pattern is very similar to the entrepreneurs pattern described by McCrae and Costa (2002). This contributed to creating a business after the Portuguese Company.

Nevertheless, “it seems that a very high level of dispositional optimism implies overconfidence that is particularly dangerous in dynamic environments where timely realistic judgments of opportunities and risks are first and foremost important.”(Brandstätter 2011, 228). We might then suspect that the failure of the First Business may have been not only a problem of unfavourable economy but also the result of some naivety in judging opportunities. On the other hand, at the point of deciding to close the business, the Subject did a particular fast and realistic judgment:

“Three months after opening, I concluded that the [Business] was not profitable, but I was tied up to a year rental contract and decided not to break it at that time. As soon as the contract terminated, I closed the business.”

4.2.2.2 Knowledge

Know-why, which should give the sense of identity and meaning, is not much mature. It is used along the career, with particular relevance in two of the transitions, but is also continuously created. It makes us sense that a final view of the self is not fully developed yet. As the Subject mentions by the end of the testimony:

“I am still learning how to manage people, and how to integrate in company culture. But it is being a lot of stress and a lot of fun.”

Entering College started a time of Know-how acquisition both from teachers (represented as Bosses) and from colleagues (represented as Peers).

MBA, although similar in terms of impact on Know-how, added the support from teachers and the development of self-identity with Know-why improvement.

In all situations of employment existing Know-how was first used and only afterwards further created in the job. This fact indicates that if this knowledge did not exist, either the transition would not be available or the transition would have been much more difficult.

Finally, Know-whom developed in all stages, in consequence of a high Extroversion score. This way of knowledge was key in the four latest transitions.

4.2.3 External System Analysis

4.2.3.1 Family

Family was a major presence in the career, influencing the College choice, First Job, leaving International Experience and going Back in the Race.

First Job choice was a point where Family influenced the decision with good results:

“The family advice was taken, as [the company] was seen as a great place to work and learn. This revealed to be true and exceeded by far all expectations.”

Family was also an important source of support Previous to College and at First Business. Recognition from Family was only present at College and at International Experience.

Particularly interesting in the combined Support/Stress relationship during First Business.

4.2.3.2 Bosses and Peers

During most of the career, both Bosses and Peers were a source of support and knowledge.

In First Job in particular, support from Bosses and Peer enabled the improvement of all personality Factors: Extraversion and Agreeableness increased significantly, Openness to Experience and Conscientiousness improved, and Neuroticism decreased.

The exception to this positive effect was the period in Portuguese Company. Both successive Bosses and successive Peers were creating Stress during most of this long phase (eight years). This suggests that it was more a matter of global culture adjustment than a particular personal or circumstantial misfit.

4.2.3.3 Economy

The influence of economy was not felt in the beginning of the career.

The first impact of the Economy was in supporting the move to the International Experience. But from middle of the career, economy played a very negative role: it pressured the decision to stay at the job in the Portuguese Company even under stress:

“But then, the market had dropped and there was no optimism. I decided to stay.”

Economy has put Stress in the First Business, and pressured to take the Back in the Race move.

4.2.4 Ba

As the career evolved, the predominant Ba changed from the most basic Originating Ba to include Interacting Ba.

Originating Ba is present where close relationships with other individuals were established. In more formal environments with distant relationships, it was not predominant.

As interacting Ba refers to the creation of knowledge between individuals, it is natural that it appears when Peers and Subject are at the same level. This happens in learning environments and in later stages of the career. During First Business the non existence of Peers does not allow for Interacting Ba to exist.

Combining Ba is evident in Portuguese Company, as this was the only big company experience.

Exercising Ba is present in all jobs except for the Back in the Race. This can be justified by the non existence of procedures in a start-up company making on-the-job training not possible.

4.3 Luck

We must recall that Luck entered the model in two ways: by its presence in the Keyword list and also by incorporating the Systems Theory of Careers.

However, Peake and McDowall (2012) have shown that Know-whom use is often confused with Luck.

From the model, we observe that the only moment when Luck appears as the solely reason for transition is from College to First Job. In all other situations it does appears in conjunction with Know-whom. Luck was not pure Luck, but the unexpected use of knowledge. Had that knowledge not been there, Luck would have never taken place.

4.4 Summarizing the Factors for each Transition

To sum up, we reach to the last research question:

Was this particular career moved by competencies that are created, or was the career a random walk?

Considering the personality Factors, Luck, the Economy, Bosses and Peers, Family and knowledge influences we realize that, according to systems theories, the resulting career development must be a consequence of the interaction of the various factors. We intend to identify the most relevant ones.

Figure 11 represents the factors for each transition.

The single factor that influenced career development the most was Luck, it influenced 5 out of 7 transitions.

Know-whom influenced 4 out of 7 transitions.

If we view Luck as dependant on Know-whom, then the reading changes. And if we group all three ways of knowing, then five out of seven transitions were due to knowledge usage.

We must conclude that the career development was a result of knowledge or competencies and not a result of pure chance or randomness.

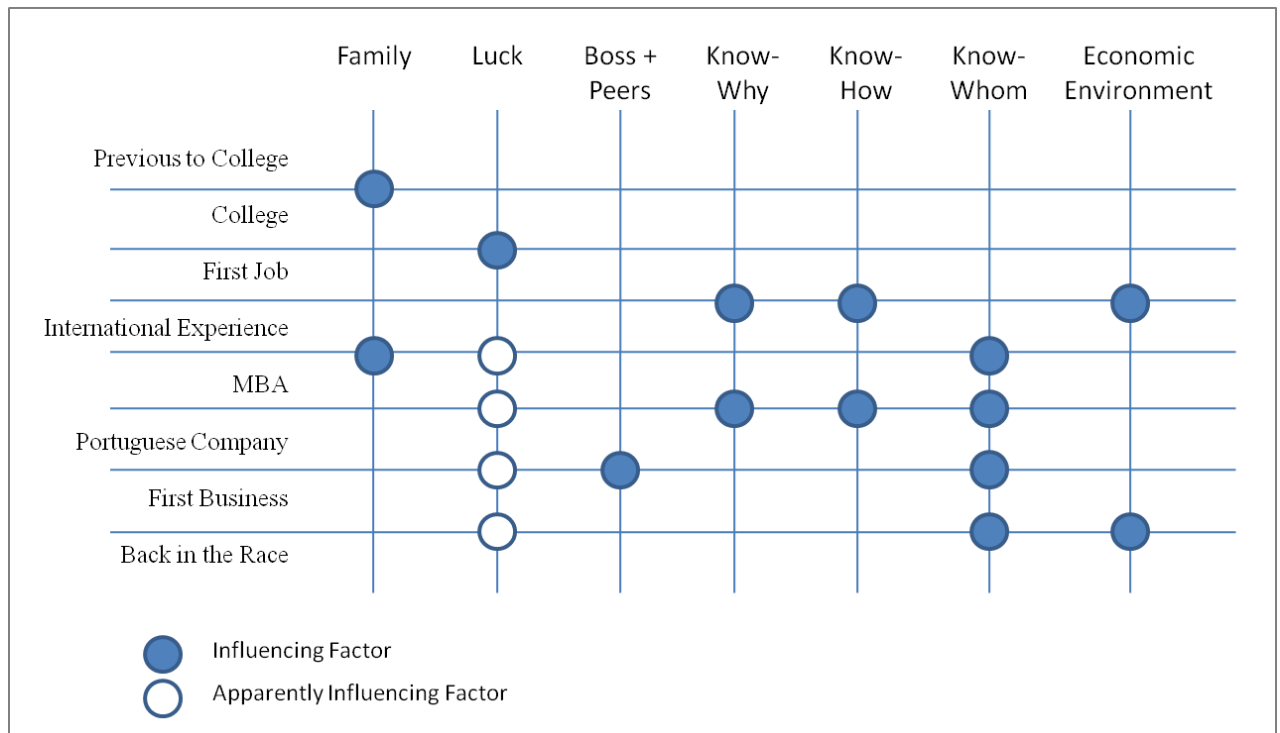


Figure 11 Summary of factors in each transition

4.5 Future Trends

Considering that at the final stage of this narrative:

- 1) Openness to Experience is high, favouring change
- 2) Neuroticism is high creating a sense of insecurity and worry, not favouring change
- 3) No use of Know-why, incentivising the search for meaning
- 4) Family is pushing for a decision to stay in the job
- 5) Economy is pressuring also to stay
- 6) Support from Bosses and Peers creates a favourable condition to stay

There is no change to be expected in the short term.

However, it seems that personality Factors are becoming similar to the ones at MBA. Point Attractor should also work to further bring personality Factors up, namely by increasing Conscientiousness. Furthermore, the diverse knowledge has the potential to open opportunities in the medium term.

Therefore, if economy or family pressure to stay is reduced, then a decision to move may be considered in the medium term.

5 Conclusions

By incorporating Theory of Careers and other state of the art concepts in Business Narrative Modelling Language, a visual holistic representation of a career was built. The resulting model is very successful in representing a complex set of relationships that unfold along the timeline, in a simple, clear and coherent way.

The study started with the goal of understanding how a career develops and in particular whether it is driven by competencies or if it is the consequence of chance events.

Transcending the answer to the research questions, this study has provided the following benefits:

- Created a tool for describing and analyzing life narratives
- Highlighted the factors behind the evolution of the career
- Indicated the likely trend for future developments of the career
- Provided a means for transformation and career identity definition

The three research questions were:

How did this particular career develop?

Why did this particular career develop the way it did?

Was this particular career moved by competencies that are created, or was the career a random walk?

5.1 How did this particular career develop?

We concluded that this is a boundaryless career of a protean individual with an entrepreneurial attitude.

This career has developed in a continuous sequence of places where knowledge was created through bosses, peers and teachers interaction.

Starting just after College, First Job started a period of growth and personality Factors improvement. This trend continued in an even more favourable way during the following International Experience.

The MBA has then consolidated knowledge and provided new avenues for growth, in particular bringing the Financial knowledge that was key in the next move.

At this point, personality Factors had a very favourable pattern and the career seemed to be in its way to success. However, due to cultural misfit, the interaction of the Subject with Peers and Bosses was unstable and although performance was high, the career stagnated.

Only after a long period of stress did the Subject came out of the deadlock by starting the First Business. Growth was reinitiated and personality Factors were slowly bouncing back to previous trend. Economical environment forced an end on this experience.

The Subject very quickly used the recently recovered personality Factors and knowledge to move to the next phase of Back in the Race, where career is once again on track and moving forward.

5.2 Why did this particular career develop the way it did?

By analyzing the model, we verified that Luck was the factor that was most present in career transition moments.

However, we also realized that in four out of the five transitions where it was present, it appeared in the form of the use of Know-whom. We must then assume that had not been for the previous building up of this type of knowledge, Luck would have not existed.

On the other hand, in all situations of employment Know-how was first used and only afterwards further created. This fact indicates that if this knowledge did not exist, either the transition would not be available or the transition would have been much more difficult.

The pattern of personality of the Subject corresponds to an entrepreneur profile which led to some experiences in this field.

Therefore, the career developed the way it did because the continuous creation of Know-how and Know-whom qualified the Subject for taking opportunities. The choice to take it or not was a consequence of the Subject's aspirations contained in Know-why and personality Factors, conditioned by the Economic Environment and Family issues.

5.3 Was this particular career moved by competencies that are created, or was the career a random walk?

Only on a very superficial reading can we see randomness in this career. In fact, the career is driven by competencies that build up synergistically, creating the conditions for the next transition.

5.4 Limitations of the Study

The underlying subjectivity is a concern common in all case studies, as “a challenge for the systems theorist is to accommodate personal constructions into the system.”(Pryor and Bright 2003, 122). By validating the method and using specific tools we limited the subjectivity, although it is never possible to remove it completely.

Other limitations are the fact that this is a single case study, and the little triangulation of data due to being based in only three sources of information: the curriculum vitae, the testimony and the Subject review.

To mitigate this limitation, the Family was also asked to review the model.

5.5 Suggestions for Further investigation

The present study focused on the development of the career and the reasons for its development. However, due to providing a holistic view of the career, this methodology would be also helpful in analyzing other particular point of views. For example, the peers influence along the career, the entrepreneurship spirit growth or the importance of the type of Ba.

Convinced of the validity and value of the method, we would suggest that other researchers use the methodology for other careers in order to exploit its comparative capabilities.

5.6 Summary of the Review from the Family

At the end of the study, two elements of the Family were asked to observe the model and comment on it. The feedback was very positive, with the confirmation that in particular the personality Factors evolution did correspond to their perception. There were also comments stating that the model is easy to read and gives a realistic view of the facts.

5.7 Final Note from the Subject

“Looking back at my career from its beginning to the current time transformed my career identity. The learning from the theories presented created a dialogue with the researchers of careers; the analysis of the model brought factors into light and gave me an objective distance and an understanding proximity.

I was not sure of the result that would come out from this exercise; I had expected it to be more descriptive and less analytical. I am very pleased to have been wrong. I was surprised by the capability of the model to explicit factors and interactions, and even to read the whys and to guess the future trends.

It was a rich and growth experience.”

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